WHAT IS CLAIMED IS:

1. A non-volatile memory control device for controlling a non-volatile memory in which data are erased sector by sector and data are written page by page, comprising:

an extracting unit extracting a free page of said non-volatile memory;

a first writing unit writing, to the free page extracted by said extracting unit, a directory including a table for translating a logical page number of a page, to which updated data are to be written, to a physical page number; and

a second writing unit writing said updated data to the free page extracted by said extracting unit.

2. The non-volatile memory control device according to claim 1, wherein

said non-volatile memory has pages arranged in a ring; and

said extracting unit extracts a free page starting from a lowest page, when a highest page is not a free page.

3. The non-volatile memory control device according to claim 1, wherein

said directory further includes a first pointer indicating a directory page to be newly written next and a second pointer indicating a second latest directory page.

4. The non-volatile memory control device according to claim1, wherein

said directory further includes first and second flags;

said first writing unit sets said first flag when writing to a directory page is complete; and

said second writing unit sets said second flag when writing of a data page is complete.

5. The non-volatile memory control device according to claim 4, wherein

said second writing unit reads said written data, and when the written data matches the read data, rewrites said first flag.

6. The non-volatile memory control device according to claim 1, wherein

said directory further includes a third pointer indicating an oldest sector.

7. The non-volatile memory control device according to claim 6, wherein

said directory further includes a fourth pointer indicating a sector that becomes the oldest when the oldest sector is erased.

8. The non-volatile memory control device according to claim 1, wherein

said directory further includes a third flag; and

said first writing unit sets said third flag when writing to said directory page is complete.

9. The non-volatile memory control device according to claim 1, wherein

a directory page is set in a fixed page of a plurality of sectors of said non-volatile memory.

10. The non-volatile memory control device according to claim 1, wherein

a fifth pointer indicating a next directory page is stored in a fixed page of a plurality of sectors of said non-volatile memory.

11. The non-volatile memory control device according to claim 1, wherein

said first writing unit successively writes a sixth pointer indicating said table in a fixed sector of said non-volatile memory.

12. A non-volatile memory control device for controlling a non-volatile memory in which data are erased sector by sector and data are written page by page, comprising:

a first searching unit searching for a directory page including a table for translating a logical page number of a page, to which updated data are to be written, to a physical page number, a first pointer pointing a directory page to be newly written to, and a second pointer pointing a second latest directory page, and successively searching through directory pages based on the first and second pointers included in the directory pages;

a second searching unit referring to the table in the directory page searched out by said first searching unit and searching whether a desired logical page is contained or not; and

a reading unit reading, when the second searching unit searched out a plurality of desired logical pages, data from a physical page that corresponds to the logical page included in the latest table.

13. A non-volatile memory control device for controlling a non-volatile memory in which data are erased sector by sector and data are written page by page, comprising:

an extracting unit referring to a directory page including a table for translating a logical page number of a page, to which updated data are to be written, to a physical page number and a pointer pointing the oldest sector and extracting a logical page included in the oldest sector;

a searching unit searching whether a logical page identical with the logical page extracted by the extracting unit is included in any other sector; and

an erasing unit erasing said oldest sector, when it is determined by said searching unit that identical logical pages are all included in other sectors.

14. The non-volatile memory control device according to claim 13, further comprising

a copying unit copying, when said searching unit determines that an identical logical page does not exist in any other sector, said logical page and corresponding directory page to a free page; and

said erasing unit erases said oldest sector after copying by said copying unit is complete.